THE MOST NOBLE

auncient, and learned playe, called the Phi-
losophers game, inuented for the honest re-
creation of students, and other sober persons, in
passing the tediousnes of tyme, to the release of
their labours, and the exercise of
their wittes.

Set forth with such playne precepts, rules, and ta-
bles, that all men with ease may vnderstande
it, and most men with pleasure practise it.

by Rafe Leuer, and augmen-
ted by W. P.

Printed at London by Iames Rowbothum, and are
to be sold at his shop vnder Bowchurch
in chepe syde.

The Lord Robert Duddelye.

Vulnere virescit virtus.

The Phyſnogmie here figured, appeares by Paynters Arte:
But valyant are the vertues that poſſeſſe the inward parte.
Whych in no wiſe may paynted be, yet playnely do appeare.
& ſhine abrod in euery place with beames moſt bright & cle

TO THE RYGHT HO-

norable, the Lord Robert Dudley, Maiſter of the Queenes Maieſties horſe, Knight of the moſt honorable order of the Garter, and one of the Queenes maieſties priuie Counſell, IAMES ROVSOTHVM heartelye wiſheth longeliſe, with encreaſe of godly honour and eternall felicitie.

SIth that your honour is (full bent,
(right honorable lord)
To vviſdō & to godlines
vvith true faithfulaccord

Sith that in deed you do delyte,
in learning and in ſkyll:
The ſhovv vvherof doth vvell expreſſe
a perfect godly vvyll.

Sith that alſo you haue in hand,
affayres of force and vvaight:
And ſtudy do both day and night,
to ſet all thinges full ſtraight.

I thought therfore your honour ſhould
not lacke ſome godly game:
VVhereby you might at vacant times
your ſelf to paſtyme frame.

VVhereby I ſay you might releaſe,
ſuch trauailes from your mynde:
And in the meane vvhile honeſt mirth
and prudent paſtyme fynde.

Remembring then this auncient play,
vvhere vviſdome doth abound:
Called the Philoſophers game,
me thinkth I haue one found.

VVhich may your honour recreate,
to read and exerciſe:
And vvhich to you I here ſubmit,
in rude and homly vviſe.

Pithagoras did firſt inuent,
this play as it is thought:
And therby after ſtudies great,
his recreation ſought.

Yea therby he vvould vvell refreſhe,
his ſtudious vvery braine:
And ſtill in knovvledge further vvade
and plye it to his gaine.

Accompting that a vvicked play,
vvherin a man leudely:
Miſpendes his tyme & vvit alſo,
and no good getts thereby.

But greuouſly offendes the Lord,
and ſo in ſteed of reſt:
VVith trouble and vexation great,
on euery ſide is preſt.

Moſt games and playes abuſed are,
and fevve do novv remaine:
In good and godly order as,
they ought to be certaine.

For vvhy? all games ſhould recreat,
the heuy mynde of man:
And eke the body ouerlayde:
vvith cares and troubles than.

But novv in ſtead of pleaſant mirth,
great paſsions do ariſe:
In ſtead of recreation novv,
reuengings vve practiſe.

In ſtead of loue and amitie,
long diſcords do appeare:
In ſtead of trueth and quietnes,
great othes and lyes vve heare.

In ſtead of frendſhip, falſhode novv,
mixed vvith cruell hate:
VVe finde to be in playes & games,
vvhich dayly cauſe debate.

Pithagoras therfore I ſaye,
to make redreſſe herein:
Inuented firſt this godly game,
therby to flye from ſinne.

Since vvhich time it continued hath,
in Frenche & Latin eke:
Still exerciſde vvith learned men,
their comforts ſo to ſeeke.

VVherby

VVherby vvithout a further profe,
all men may be right ſure:
That this game vnto grauitie,
and vviſdome doth allure.

Els vvould not that Philoſopher,
Pithagoras ſo vvyſe:
Haue laboured vvith diligence,
this paſtime to deuyſe.

Els vvould not ſo vvell learned men,
haue amplified the fame:
From tyme to tyme vvith trauell great,
to bring it into fame.

But let vs nerer novv proceed,
and come vve to theffect:
And then ſhall vve aſſuredly,
this paſtime not neglect.

For it vvith pleaſure doth aſſvvage,
the heauy troubled hart:
And vvith lyke comforts driues avvay,
all kynde of ſourging ſmart.

The mynde it maketh circumſpect,
and heedfull for to bee:
The tyme that theron is beſtovvd,
is not in vaine trulye.

The body it doth ſtyrre and moue,
to lightſomnes and ioye:
The ſences and the povvers all,
it no vvyſe doth annoye.

It practiſeth Arithmeticke,
and vſe of number ſhovvth:
As he that is conning therein,
aſſuredly vvell knovvth.

In Geometrie it truly vvades,
and therein hath to do:
A learned play it is doutleſſe,
none can ſay nay thereto.

Proportion alſo muſicall,
it ioynes vvith thother tvvayne:
So that therin three noble artes,
are exerciſde certayne.

VVhat

VVhat game therfore lyke vnto this,
may gotten be or had?
There is not one that I do knovv,
the reſt are all to bad.

It cauſeth no contention this,
nor no debate at all,
By this no hatred vvrath nor guyle,
in any vviſe doth fall.

It ſtirreth not ſuch troubles that,
our frend becomes our foe:
It moueth not to miſchiefe this,
as many others do.

Let vs auoyde the vvorſt therfore,
and cleue vve to the beſt.
So ſhall vve ſhunne all vvickednes,
and purchaſe quiet reſt.

So ſhall vve ſerue the liuing Lorde,
and vvalke after his vvill:
So ſhall vve do the thing is good,
and flye that vvhich is yll.

So ſhall vve liue right chriſtianlyke,
and do our duties vvell:
So ſhall vve pleaſe both god & prince,
none ſhall vs need compell.

And then the Lord of his mercie,
vvill proſper vs alvvayes:
And graunt vs here to haue on earth,
full many godly dayes.

Yea then the Lord of his goodnes,
and grace celeſtiall:
VVill guyde and gouerne our affaires,
and bleſſe our doings all.

VVhich Lord graunt to your honour
good dayes & long to haue: (here,
vvith much encreaſe of helth & vvelth
and from all hurt you ſaue.

Your honours moſt humble,
Iames Roubothum.

To the Reader.

I Dout not but some man of seuere iudgement so soone as he hath ons read ꝑ title of this boke wyl immediatly sai, that I had more need to exhort men to worke, then to teach thē to play, which censure if it procede not of such a froward morositie that can be content with nothing but that he doth himself, I do not only well admit, but also willingly submit my self therto. And if I could be persuaded that men at mine exhortation wold be more diligent to labour, I would not only write a treatise twise as lōg as this, but also thynke my whole time wel bestowed, yf I

did

did nothing els, but inuent, speake, and write that which might exhort, moue, & persuade them to the furtherance of the same. But if after honest labour and trauell recreatiõ be requisit, (and that nede no further probation because we fauour the cause wel inough) I had rather teach men so to play, as both honestye may be reserued, their wittes exercised, they them selues refreshed, and some profit also attayned, then for lacke of exercise to see them either passe the tyme in idlenes, or els to haue pleasure in thyngs fruitles and vncomely. And if great Emperours and mighty Monarches of the world haue not bene ashamed by wryting bookes to teache the art of Dyce play

playing, of all good men abhorred, and by all good lawes condemned: haue I not some colour of defence, to teache the game, which so wyse men haue inuented, so learned men frequented, and no good man hath euer condemned. The inuention is ascribed to Pythagoras, it beareth the name of Philosophers, prudēt men do practise it & godly men do praise it. But because many herein (as in a play) haue challenged much authoritie, they haue filled this game with much diuersitie. In which as I could perceiue the most differens of playing to cōsist in three kindes, so haue I playnly and briefly set thē forth in Englishe not as though there might not more diuersities be espied, but that

that I thought these to them whom I haue written to be sufficient. yet for that I woulde be lothe, frō playe & game, to fall to earnest contention, if any man in this doing or any part therof shall think I haue done amisse, and will do better himself, so far am I from enuying his good proceding, that I wil be right glad, and geue him heartye thankes therefore.

The bookes verdicte.

VVanting I haue bene long truly,
In engliſh language many a day:
Lo yet at laſt novv here am I,
Your labours great for to delay,
And pleaſant paſtime you to ſhovve,
Mynding your vvits to moue I trovve.

For though to mirth I do prouoke,
Vnto VViſdome yet moue I more:
Laying on them a pleaſant yoke,
VViſdom I meane, vvhich is the dore,
Of all good things and commendable:
Dout this I thinke no man is a ble:

CATO.

Interpone tuis interdum gaudia curis:
Vt poſsis animo quemuis ſufferre laborem.

The bookes vo-
lúme.

The diffinition

That moste auncient and learned playe, called the Philosophers game, beinge in Greeke termed ευθμομαχια, is as much to saye in Englishe, as the battell of numbers. Numbers be either euē or odde, wherefore the euen parte is against the odde, either parte hauinge a kyng, whych being taken of the aduersaryes part, and a triumphe celebrated within his campe, the game is ended.

Of diuerse kyndes of playinge.

Among the diuerse kyndes of playinge this game, we shall sette forth three sortes, of whiche the reader maye chose whether of them he lyketh beste. And of all those three, we shall

gyue suche shorte and easye rules, that no man (althoughe he were altogether ignorannt in Arithmetike) shall fynde the game so hard, but that he may learne to playe it.

¶Of the partes of thys Game.

He that wyll learne thys game, any of the three waies, muste firste be enstructed of these fyre partes. The table as the fielde. 2. the menne and the numbers of them as the hoste. 3. the placynge of them, as the encampinge. 4. the order of playe and remouynge the men, as the marchynge and fyghtynge. 5. the manner and lawes of conquerynge and taking. 6. and last of al the triumphe after the victorye.

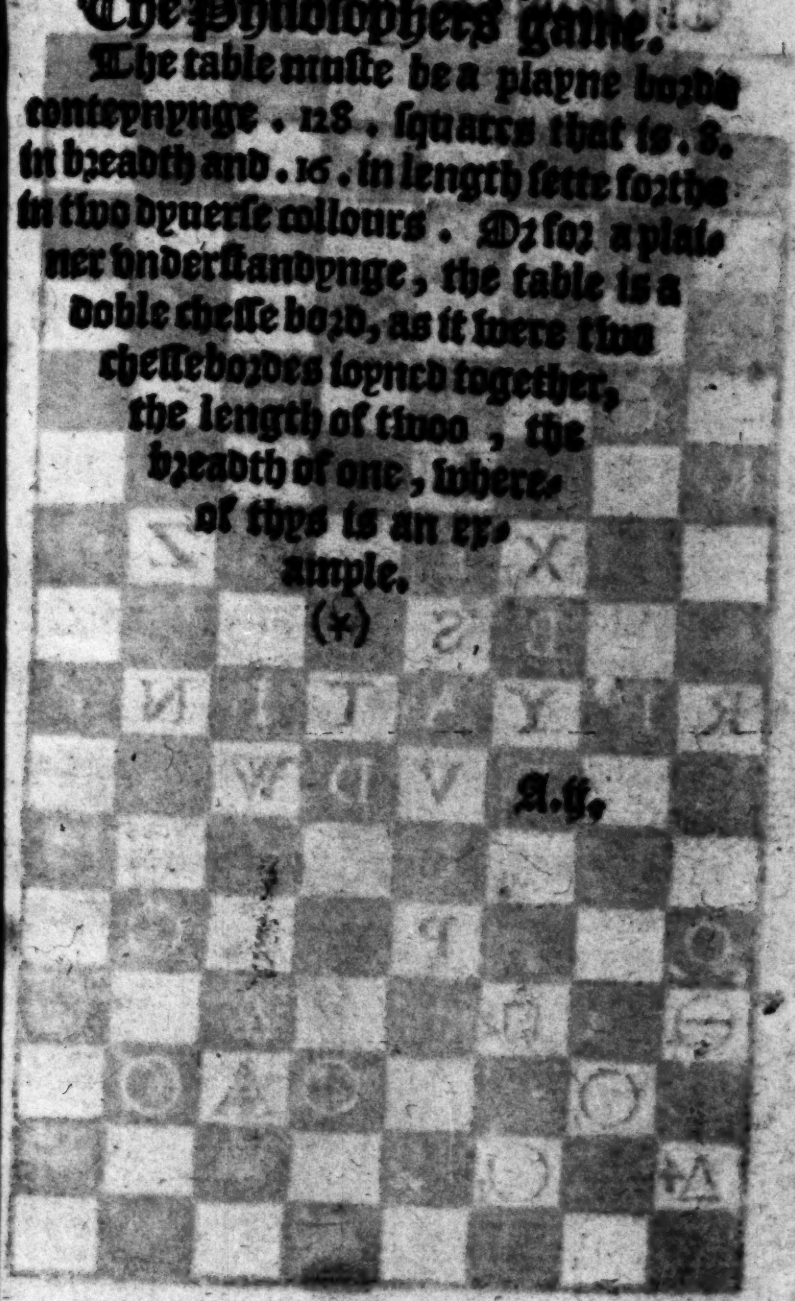
¶Of these partes in the fyrst kynd of playng.

¶The

The Philosophers game.

The table muste be a playne boȝde conteynynge .128. squarrs that is .8. in bȝeadth and .16. in length sette foȝthe in two dyuerse collours. Mȝ foȝ a plainer vnderstandynge, the table is a doble chesse boȝd, as it were two chessebooȝdes ioyned together, the length of twoo, the bȝeadth of one, wherof thys is an example.

(*)



A.ij.

The Philosophers game.

The Philosophers game.

Of the men.

The men be in number. 48. Wherof. 24. be of one syde & must be knowen by one colour, and. 24. on the other syde, whyche also must be marked with a contrarye colour, as White and Blacke, Blew and Redde, or what colours els you lyke best. But in the coloring these. 3. thinges must be observed, ỹ bottome or lower part of every man (excepte the two kinges) muste be marked wyth hys aduersaryes colour, that when he is taken, he maye chaunge hys coate and serue hym vnto whome he is pryſoner.

The seconde thinge considered in the men, is their fashion: for of eyther syde. 8. are rounds, other. 8. are triangles & 7. (the king making. 8) are squares. Their fashion is such

rounds triangles squares

The kynges because they consist of all three sortes, as it is knowen by the learned speculation of the numbers, beare

the fashio of all thre kinds, his foundations are two squares, on which are sette, two triangles & vpō them rounds. But this difference is betwene the kinges, ꝙ the king of the euen nubers, hath a pointed toppe, the king of ꝯ odde numbers is not pointed, the cause dependeth vpon ꝯ consideratiō of there numbers by which they arise into piramidall fashion. The third thing considered in the men, is the number that must be writtē or grauē vpon them which to learne plainely for practise marke these short rules.

There be of eche kynde of men, two rankes or orders.

The first ranke or order of roundes be ꝯ digites euen or odde namely of the euen. 2.4.6.8. of the odde. 3.5.7.9.

The second order of rounds are found by multiplyinge these digites by thēselues as. 2. times. 2. is. 4. 3. times. 3. is. 9. Of the euen they be . 4.16.36.64. of the odde they be. 9.25.49.81.

The first order of the triangles are found by addinge two of the roundes together

gins

one of the firste order and another of the seconde order, as .2. and .4. make sixe 3. and .9. make twelue, on the euen syde they are these . 6. 20. 42. 72. on the odde syde. 12. 30. 56. 90.

The second order of triangles be made by addynge one to euery one of the first order of roundes, and then multiplying that number in hym selfe; as .2. is one of the firste order of roundes, thereto adde one, ỳ is .3. then .3. tymes .3. is .9. a triangle of the seconde order, on the euen syde. Likewise to the a round on the odde side, adde .1. so is it .4. then .4. tymes .4. is .16. On the euen parte, they be .9. 25. 49. 81. on the odde parte .16. 36. 64. 100.

The first order of squares (in whyche are contayned the kynges) be made by addynge two triangles together, one of the fyrste order, and another of the seconde, as .6. and .9. make .15. likewyse 12. and .16. make .28. Amonge the euen they be . 15. 45. and . 91. the kynge. 153. amonge the odde they be . 28. 66. 120. and .190. the kynge.

The last order of squares be found, by dobling of euery one of ỹ firste order of roundes, and after adding one, last of all by multipling that number in itself, as twise. 2. is. 4. and. 1. added is. 5. so. 5. times 5. is. 25. likewyse twyse. 3. is. 6. 1. added is 7. then. 7. tymes. 7. is. 49. These be on the euen syde. 25. 81. 169. 289. And of the odde syde. 49. 121. 225. 361.

These numbers must be sette vppon the men both on the vpper side, & also on the nethersyde. Except one of ỹ kinges, which must with the whole number of their pyramis, be marked, onely on the bottome. Because the sydes muste haue other nũbers, namely the highest point of the euen kyng, must haue. 1. ỹ rounde nert vnder him marke with. 4. the vpper most triangle wt̃. 9. the nethermost wt̃. 16. The vpper most square muste haue. 25. The nethermost square shall haue. 36. The king of the odde vpon his head, which is a rounde, not pointed hath. 16. vpon his firste triangle. 25. on the second triangle. 36. vppon the fyrste square. 49.

vpon the lowest square.64.

Finally it shalbe good for the auoydance of confusion, to drawe a line vnder euery number. Ells may you take one for another, as ⑥ the euen round & ⑨ the odde rounde, may be taken one for another with oute this lyne or some suche marke, lykewise △ and ▽ Tryangles bothe of one syde. And this is sufficient for the men, the fashion, colours and numbers.

¶ The reason of these numbers and the knowledge of their proportione.

FOr them that seke the speculation of these numbers, rather then the practise for playing, and haue some sight in the sciens of Arithmetike, some thyng must be sayde of proportion. For this purpose there be three kyndes of proportion. Multiplex, superparticuler and superpartiens.

The Phylosophers game.

Of multiplex.

MULTIPLEX proporcion, is when a great number conteyneth a lesse number manye tymes, and leaueth nothinge, as . 8. conteyneth. 2 folwer tymes and nothing remaineth. 16. conteineth. 4. ex, this proporcio semeth best to agree with roundes because the one number conteyneth the other and nothynge remaineeth as the fylle oyder ex roundes be.

The Philosophers gaune.

The second order be these.

doble. quadruple. sextuple. octuple.

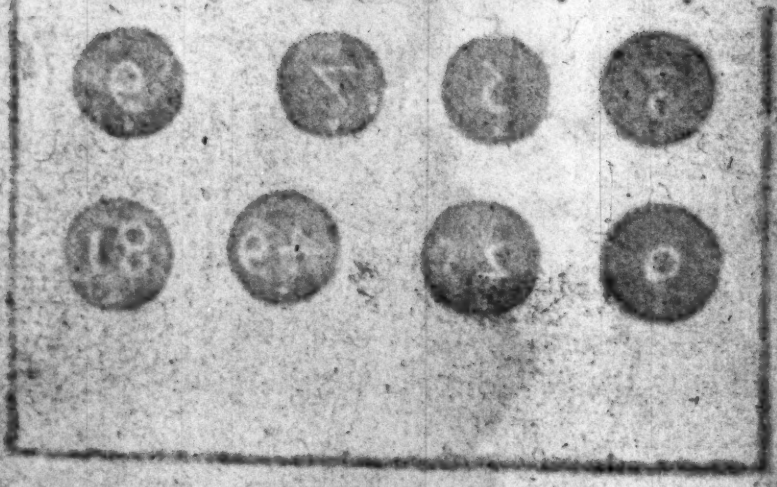
pro-
por-
tion.

triple. quintu-ple. septupl. nonuple

The Philosophers game.

Of superparticuler proporti-on.

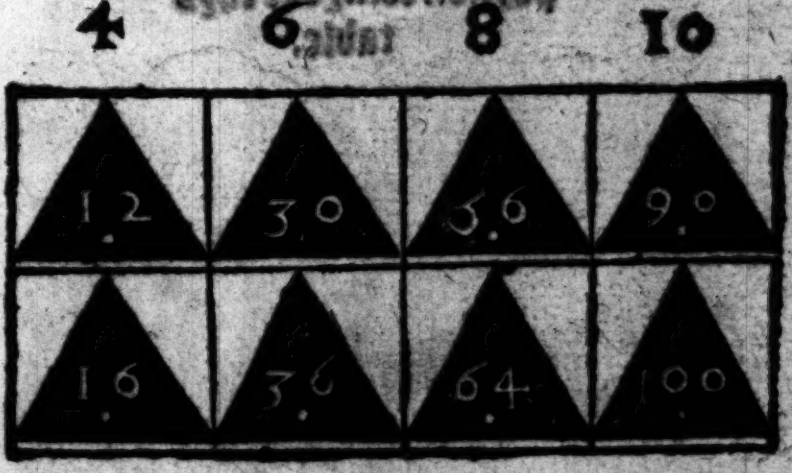
Superparticuler proporcion is when a greater number contayneth a lesser with one part of it, which may measure the whole, as. 12. contayneth. 9. and 3. whiche is a thyrde parte of nine. 6. contayneth. 4. and. 2. that is one halfe to 4. Thys proporcion beinge the cheife, next vnto multiplex, is beste figured by a triangular forme, whyche hathe fewest lynes and angles next vnto a circle. For the manner of thys proporcion consider thys figure.



The Philosophers game.

Sesquialter. Sesquiquart. Sesqui. sext. Sesqu. oct.

Sesquiter. Sesquiquint. Sesquisept. Sesquinona.

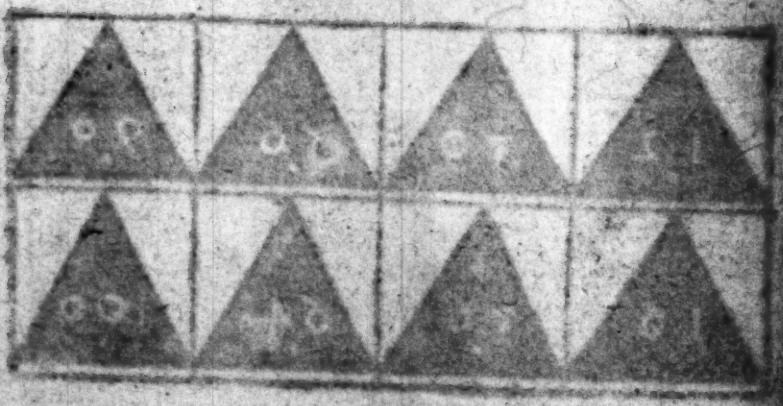


The Philosophers game.

Superpartiens proporcion.

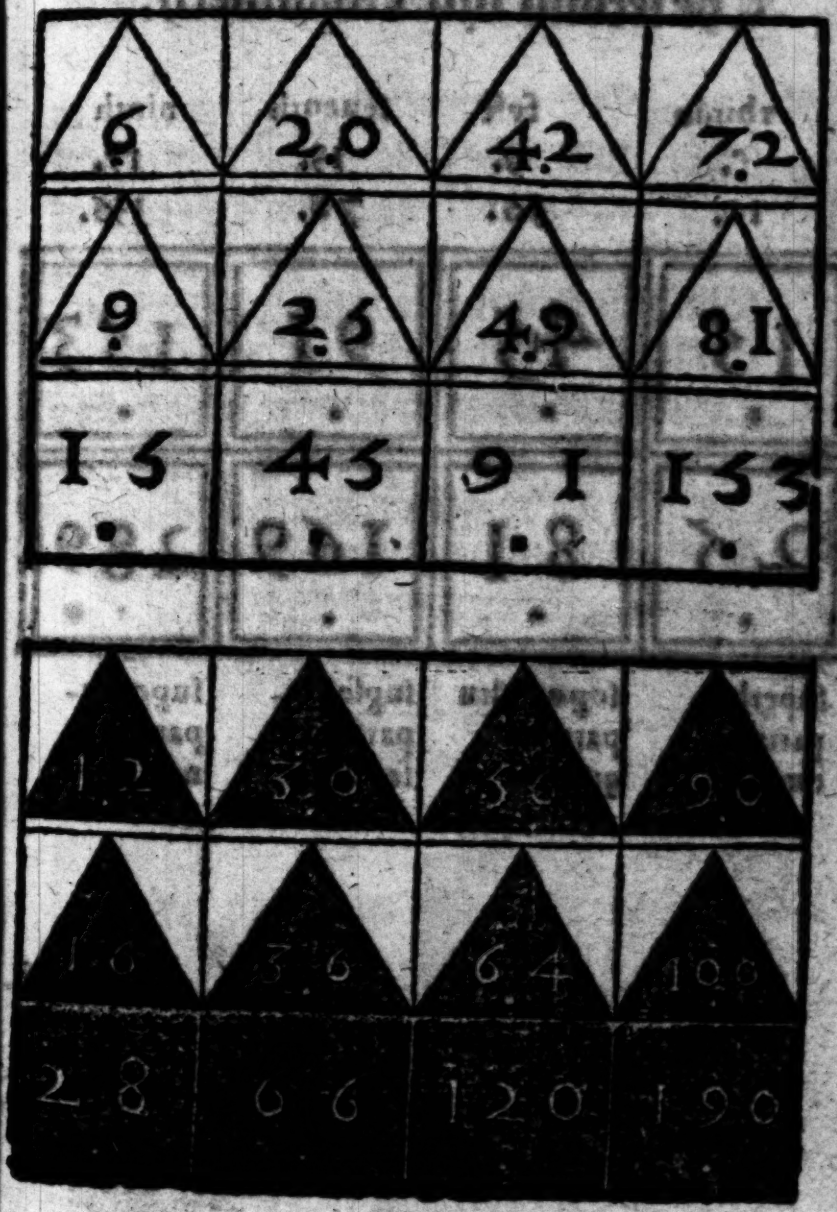
THE superpartiens proporcion is when the greater number conteyneth the lesser and no partes of it then one as .15. conteyneth .9. and .6. whiche is two thirdes of .9. lyke wyse .28. conteineth .16. and .12. that is ¼ of .16. This proporciõ conteineth diuers parts besides the whole number therfore is wel figured in the square, which also conteyneth more corners and sides.

For the maner of their proporcion consyder thys table.



The Philosophers game.

The first order of squares.



supparticulres added

being the squares

The Philosophers game.

The second order followeth.

Fourth

The Philosophers game.

Fourth	sixth	eight	ninth
7.	11.	15.	19.
21.	55.	105.	171.

supertri-partiens. quartas.	supquin-tupartiēs. sextas.	supsep-tupartiens. Octauas.	supnon-partiens. decimas.

Of the kings.

THe kinges conteine in them suche numbers, as beyng all added together, make the whole piramidall number, the lowest square of the euen, is 36. which riseth of the multiplying of .6. in it selfe. The next square that must be lesse, is .25. arisinge by the multiplyinge of fyue in it selfe and so followeth .16. of .4 then .9. of .3. lasse .4. of .2. and single .1. all these added together, make .91. After the same maner consisteth the king of odde. The lowest square is .64. arisinge of .8. multiplied in himselfe. The next .49. of 7. times

7. times. 7. then. 36. of. 6, 25. of. 5. and. 16. of 4. these numbers make the whole pyramidall number. 190. which because it riseth not to the poynct of one, oughte not to be sharpe poynted, as hathe beene sayde before.

¶ Of the placing, encamping or setting in araie.

TO retorne againe to the plaine and easye playing of this game, next to the armie & their armour, followeth the order of their battel or encamping. Whiche because it is more playne and easely seen which the eye, then learned by the eare, I referre thee vnto the table where the battell is appoynted in suche order as this kynde of playe requireth.

25	89					169	289
15	45	25	20	42	40	84	137
9	6	4	16	36	64	72	81
		2	4	6	8		
		9	7	5	3		
100	56	81	49	25	9	2	16
130	120	64	56	30	20	66	28
361	225					121	49

¶ Of the marchinge or remouing of the men.

THE battell beyng duely placed, it followeth next, to know the maner of marching & remouing, for euery kynd of men, hath their proper kynde of motion, and fyrste we muste speake of the roundes.

¶ The motyon of the roundes.

THE roundes muste moue into the space that is next vnto them cornerwyse, as in the table, from the space A. to any of these. B. C. D. or. E.

¶ Of the triangles.

THE triangles passe three spaces counting that in which they stande for one, and that into whych they do remoue for another, that is leaping ouer.

one space. As from the space. A. he may remoue into any of these spaces. F. G. H. or. I. this is the motion of the triangle in marchyng or takyng. But in flying he maye remoue the Knyghtes draught of the chesse, as from. A. into. L. or. M. &c.

Of the Squares.

The Squares remoue into the fourth place from them, that is leaping ouer two, right forwarde or sydelong, as from the place of. A. to any of these spaces. L, N. P. R. flyinge they maye remoue after the Knyghts draught, but that they must passe foure spaces, as from. P. to. R. or. T. &c. And this for the marchinge and remouyng of the men, where note, that with theyr flying draughte they can take no man, but if needs be helpe to besiege a man.

Of the Kyngs marchyng.

The kings because thei beare y forme of al y^e^ other kynds, may remoue any

of all theyr draughts when they lift, into the nerte with the rounde, into the thyrde with the triangle, and into the fourth with the square, and finally in all poyntes lyke the Queene at the Chesse, sauing that he can not passe aboue foure spaces at the most.

¶ Of the maner of taking.

THe men may be taken fire wayes, namely by Equalitie, Obsidion, Addition, Substraction, Multiplication and Diuision, and also if you wyll, and soagree, by

Proportion { Arithmeticall. Geometricall. Musicall.

¶ Of Equalitie.

The Philosophers game.

By equality men may be taken, when one man after hys motion, seeth hys enemye being of the same number that he is, standing in such place as he may remoue into, then maye he take away hys enemye and not remoue into his place, as in this example. 9. a triangle of the euē armye, after he hath remoued, espyeth .9. a rounde of the odde armye, hym may he take vp and not remoue into his place. But if. 9. the triangle, espyenine the rounde, before he remoue, standing in his draught, he maye take hym vp and remoue into his place.

These men may be taken by equalitie 9. 16. 25. 36. 49. 64. 81. because they are found in both the armies, and in asmuch as anye man taken beinge turned vpside downe hys bottome vpward, ethat beareth hys aduersaries colloure, may serue his enemye on whose syde he is taken, there maye yet be taken by equalitie, 4. and 6.

¶ Of taking by obsidion.

By obsidion anye man maye be taken euen the kinge him selfe, if he be so compassed with 4. men, that hys lawfull draught be hindered, as for example the round standing in the place of .1. and 4. men of what kynd it skylleth not, occupying the places of .2.3.4.5. after you haue set your last man in hys place may be taken by, also if a triangle be enclosed, as in. a. with any foure mē standing in. b .c.d.e. he may be taken, euen so may a square be taken. Also Triangles and squares may be beseged, if al ỹ foure mē or any of them, the rest standyng nearer, doe stande in the thyrde or fourth space from them so that they haue no waye to remoue, as a triangle or square standing in. a. may be beseged by. 4. men or anye of them (the reste standynge nearer) in. F.G.H.I. Also a square standyng in. A. maye be taken by obsidion, yf the lower

men or some of them (the rest standing nearer) doe stande in L. H. P. K. And this is sufficient for Oblidion, by which every man may be taken in maner and forme as it hath bene taught.

Of taking by Addition.

When two numbers are so brought that they fynde one of theyr enemies, which is as muche as bothe they beyng added together, standing in such place as bothe they might remoue into, they shall take hym by, without remouing into his place, so soone as the latter of those two is set downe, but if the aduersaries men be in their daunger before they remoue, one of them whether the player lyst, shalbe remoued into the place of that man which is taken by Addition. As for example. 12. the triangle is in. A. if you can bring fyue the rounde, to stande in. B. and. 6. the triangle to stande in. G. because. 6. and. 6. beyng added make. 12. and bothe maye remoue to. A. you maye take by the triangle

angle.12. by addition. Also 120. the square standing in. B. and. 49. the rounde standing in. B. 02 elles. 49. the square standing in. L. which being added together make. 69. which standeth in. A. shal take the sayde square. 169. by Addition.

¶ Of taking by Subtraction.

When two men do so stande, that the lesser beyng subtracted out of the greater, the number remaining, is all one with the aduersaries man that standeth in bothe their draughtes, so soone as the latter is set in his place, he may take awaye the aduersarie, not remouing into his place, vnlesse he finde him so before he remoue: as for example, 2. the rounde standing in. B. 5. 9. the triangle standing in. 6. shall take theyr aduersarie. 7. standynge in. A. for. 2. out of. 9. remayneth. 7. Another example.

The

The rounde.2. standyng in .A. maye be taken by.30. the Triangle standynge in Y. and the square.28. standinge in .B. by take.28. out of.30. and there remaineth.2.

¶ Of takynge by multiplycation.

When two numbers stande so, that being multiplied one by the other, the produce is all one with their aduersaryes man standynge in both their draughts, they may take that man so sone as the latter is placed. And if they lye so before thei remoue, being so left of ỹ aduersarie, one of them shal succede in his place that is taken, as in example. The rounde.3. standeth in .D. and 5. standeth in .E. these two shal take the square 15. standynge in .A. because three tymes fyue is.15. another example. The rounde 2. standing in .B. and the triangle.6. standynge in .I. shall take their enemye the tryangle.12. standing in .A. by multiplycation for.2. tymes.6. is.12.

¶ Of takyng by diuision.

By diuision a mannie maye be taken, when twoo of hys enemyes doe so stand, that one of them beyng deuided by the other, the product is the same that their enemye is, standynge in their draught, immediatly after the latter is placed, the enemye may be remoued. If he were left in their daunger before remouyng, one of them may remoue into his place, an example. The round 4. standyng in. D. and the triangle. 20. standing in. F. may take ỹ aduersarie. 5. standing in. A. by diuision, bycause. 4. in. 20. is conteyned. 5. tymes. Another example, the round. 5. standyng in B. and the triangle 30. standynge in. F. maye take their enemye. 6. standynge in A. for. 5. in 30. is conteyned. 6. tymes.

¶ Of the takynge of the tynges.

The

The Philosophers game.

THe game is neuer wonne, vntyll the king be taken. The kings (as hath bene sayde) may remoue anye way, so they passe not the fourth space. They can not be taken by equalitie. But by obsidion the whole kyng maye be taken away. Also his whole number at ones, that is. 91. 02. 190. by Addition, by Substraction, by Multiplication, or by Diuision. Also he maye be taken by partes, when any of hys syde numbers maye be taken then leseeth he that draughte, as when anye of hys square numbers is gone he can not remoue the square draught, and so of the rest, yf nothyng of him be left, then maste he be taken away, and the triumph prepared.

The lawe of prisoners.

WHen any is taken captiue, he must be tourned with his conquerers collor vpward & placed in the hindermost space of his victors campe, and from thens being remoued must fight against his conquerours enemies, and serue him also to make his triumphe.

A table

A Table to take any of the men, by addition subtraction, muluplication or diuision.

Addition.			Substractio			Addition.			Substract.		
	1			4		8	56	64		30	
1	2	3	4	4	8		9		30	36	66
1	3	4	4	5	9	9	36	45	30	42	72
1	4	5	4	8	12	9	72	81	30	90	120
1	5	6	4	12	16	9	81	90	30	91	121
1	6	7	4	16	20	9	91	100		36	
1	7	8	4	45	49		12		36	36	72
1	8	9		50		12	16	28	36	45	81
1	15	16		7	12	12	30	42	36	64	100
1	120	121		15	20		15			42	
	2			20	25	15	30	45	42	49	91
2	3	5		25	30	15	49	64		45	
2	4	6		6		15	66	81	45	noth.	
2	5	7	6	6	12		16			49	
2	6	8	6	9	15	16	20	36	49	72	121
2	7	9	6	30	36	16	56	72	49	120	169
2	28	30	6	36	42	16	153	169		56	
2	64	66	6	66	72		20		56	64	120
	3			7		20	25	45	56	169	225
3	4	7	7	8	15	20	36	56		64	
3	5	8	7	9	16	20	100	120	64	225	289
3	6	9	7	42	49		25			72	
3	9	12	7	49	56	25	56	81	72	81	153
3	12	15		8		25	66	91	72	153	225
3	42	45	8	12	20		28		72	28	361
			8	20	28	28	36	64	81	nothig	
			8	28	36	28	72	100			

The Philosophers game.

Addition.	Multiplication & Division.			
90	2		5 9 45	
90.100.190	2 3 6		5 20 100	
91	2 4 8		5 45 125	
91 nothig	2 6 12		6	
100	2 8 16		6 6 36	
100. noth.	2 15 30		6 7 42	
120	2 28 56		6 12 72	
120 169.289	2 36 72		6 15 90	
121	2 45 90		6 20 120	
121.169.190	3		7	
153	3 4 12		7 8 56	
169	3 5 15		8	
190 noth.	3 12 36		8 9 72	
225	3 15 45		8 15 120	
289	3 30 90		9	
361	4		9 9 81	
	4 4 16		9 25 225	
	4 5 20			
	4 7 28			
	4 9 36			
	4 16 64			
	4 25 100			
	4 30 120			
	5			
	5 6 30			

The Philosophers game.

By this Table any man though he haue small or no skyll in Arithmeticke, maye learne to playe at this game, and in playinge learne some parte of Arithmeticke.

¶ Of takynge by proportion.

IF the Gamesters be disposed, they maye take men also by proportion, Arithmeticall, Geometrical, or Musicall. But because it is not necessarily required that they shoulde so do, I wyll fyrst prosecute the maner of triumph, in which also they maye learne to take by proportion, as afterwarde shalbe seene. For when they can ioyne two or three of their men to one of their aduersaries men in such order as the triumph is set, so that those three or foure numbers haue anye of these three proportions they maye take their aduersaries man.

¶ Of the triumphe.

When the King is taken, ỹ triumph must be prepared to be set in the aduersaries campe. The aduersaries campe is called al the space, that is betwene the first front of his men, as they were first placed, vnto the neither ende of the table, conteyning. 40. spaces or as some wil. 48. When you entend to make a triumph you must proclaime it, admonishing your aduersarie, that he medle not with anye man to take hym, whiche you haue placed for youre triumphe. Furthermore, you must bryng all your men that serue for the triumph in their direct motions, and not in theyr flying draughtes.

To triumphe therefore, is to place three or foure men within the aduersaries campe, in proportion Arithmeticall, Geometricall or Musicall, as wel of your owne men, as of your enemyes men that be taken, standing in a right lyne

lyne, direct or crosse, as in. D. A. B. or els 5. 1. 3. if it consist of three numbers, but if it stande of foure numbers, they maye be set lyke a square two agaynst two, as in. E. B. D. C. or 2. 3. 4. 5. and after the same maner muste you set them so that your aduersaries man make the thyrde or fourth, when you take by proporcion.

¶ Of dyuers kyndes of triumphes.

There be thre kyndes of triumphes a great triumphe, a greater triumphe, and the greatest and moste noble of all.

¶ Of the great triumph.

The great triumph standeth in proporcion, eyther Arithmeticall, Geometrical, or Musicall only.

¶ Of Arithmeticall proporcion.

ARithmeticall proporcion, is when ye mydle number differeth as muche from the first, as from the thyrde, that is to saye, when the thyrde hath so many more, from the seconde, as the seconde hath from the firste, as. 2. 4. 6. Here, two, is the distans, for. 4. exceedeth 2. by two, & 6. is more then foure by. 2.

¶ A rule to fynde out Arithmeticall proporcion betwene the firste and the laste.

WHen you haue the first and the last if you woulde finde out the midle in proporcion. Adde the first & the last together, and deuide the whole in 2. for the halfe is the midle in proporcio

The Philosophers game.

as I wolde knowe what is the midle number in proporcion betwene .5. and 25. first I adde .5. to .20. that is .30. the half of thirtie is .15. whiche is midle in proporcion betwene .5. and .30. so haue I .5. 15. 25. in Arithmeticall proporcion.

The .16. Table

A table of al the Arithmetical proportions that be in this game.

2	3	4	6	7	8	28	64	100
2	4	6	6	9	12	30	36	42
2	5	8	6	36	66	42	49	56
2	7	12	7	8	9	42	66	90
2	9	16	7	16	25	49	169	289
2	15	28	7	64	121	56	64	72
2	16	30	9	12	15	72	81	90
3	4	5	9	45	81		49.	
3	5	7	9	81	153			
3	6	9	12	16	20			
3	9	15	12	20	28			
4	5	6	12	42	72			
4	6	8	12	66	120			
4	8	12	15	20	25			
4	12	20	15	30	45			
4	20	36	15	120	225			
4	30	56	16	36	56			
5	6	7	20	25	30			
5	7	9	20	28	36			
5	15	25	20	42	64			
5	25	45	28	42	56			

¶ Of Geometricall proportion.

Geometricall proportion, is when the seconde hath that proportion to the first, that the thyrde hath to the seconde, as. 2. 4. 8. as. 4. exceedeth. 2. by 2. so. 8. exceedeth. 4. by. 4.

¶ A rule to fynde the mydle number in Geometricall proportion.

Multiplie the firste by the thyrde, and of the product fynde out the roote square, for that is the midle, if the numbers haue anye roote squars in whole numbers. The roote square is a number multiplied in it selfe, wherefore you muste seeke such a number, as multiplied in it selfe, maketh ỹ product of the fyrst and the thyrde number multiplied one by the other.

As .20. multiplied by .45. is .900. the roote is .30. square, whych multiplyed in it selfe is .900. But yf you lyke not to take suche paynes, here is a Table that maye serue your tourne for Geometricall proportion to be vsed in this game.

A table

A table for Geometricall proportion.

2	4	8	16	36	81	
2	12	72	20	30	45	
3	6	12	25	30	36	
4	6	9	25	45	81	
4	8	16	36	42	49	
4	12	36	36	66	121	
4	16	64	36	90	225	
4	20	100	49	56	64	
5	15	45	49	91	169	
9	12	16	64	72	81	
9	15	25	64	120	225	
9	45	225	81	90	100	
16	20	125	81	153	289	
16	28	49.		27.		

¶ Of Musicall proporcion.

Musicall proporcion is when the differences of the first and last frō the middes, are the same, that is betwene the first and the last, as.3.4.6. betwene .3. and.4. is.1. betwene.4.and 6.is.2.the whole difference is.3. which is the difference betwene.6.and.3.the first and the last.

¶ A rule to fynde the first, when you haue the two last.

Multiplie the seconde by the thyrd, deuide the produce by the distans and the thyrde number, and the quotient is the first, as haupnge.6. and 12. I would fynde the first, 6. tymes.12. is 72, the difference betwene.6.and.12.is 6, whiche added to.12.is.18, deuide.72.by 18.the quotient is.4.so haue you.4.6.12. in Musicall proporcion.

¶ To

¶ To finde the midle betwene the first and the last.

Multiplie the first by the last, then double the produce, and deuide the whole by the first and the laste added togeather, the quotient is then the mydle number. As hauyng .6. and .12. I woulde knowe the mydle in Musicall proportion. First I multiplie one by the other, the product is .72. that doubled is 144, this deuided by .18. which is the addition, of .6. and 12. geueth the quotient 8. so haue I .6. 8. 12. in musicall proportion. And thus must you worke to fynde out the thyrde in musicall proportion.

But if you had rather playe then worke, this table folowing shall serue your torne.

¶ A table

The Philosophers gaine.

A table of Musicall proportion.

2	3	6
3	4	6
3	15	16
4	6	12
4	7	28
5	8	20
5	9	45
6	8	12
7	12	42
8	15	120
9	15	45
9	16	72
12	15	20
15	20	30
5	45	225
30	36	45
30	45	49
72	90	120

17.

The Phylosophers game.

¶ Of the greater triumphe.

The greater victorie is, when foure numbers be brought together, whiche agree in two proportions, either Arithmeticall and Geometricall, or elles Arithmeticall and Musicall, or elles Geometricall and Musicall. Of these three coniunctions the greater triumph consisteth, of the which the table followeth.

A table

2	3	4	8
2	4	6	8
2	4	6	9
2	4	5	8
2	7	12	72
2	9	12	16
2	12	42	72
3	6	9	12
3	4	6	9
3	9	15	25
4	5	6	9
4	6	8	9
4	6	9	12
4	6	8	16
4	12	20	36
4	8	12	16
4	8	12	36
4	8	16	28
4	12	20	100
4	16	28	49
4	16	28	64
4	20	36	100
5	9	15	25
5	15	25	45
5	25	45	81
6	9	12	16
7	16	20	25
7	49	91	169
8	9	12	16
8	64	120	225

9	12	15	16
9	12	15	25
9	12	16	20
9	45	81	225
9	25	45	81
9	12	16	20
9	15	20	25
9	8	153	289
12	16	20	25
15	16	20	25
15	20	30	45
16	20	25	30
16	36	56	81
20	25	30	45
30	36	42	49
36	42	40	56
42	49	56	64
49	56	64	72
49	91	169	289
56	64	72	81
64	72	81	90
72	81	90	100

52.

Arithmeticall and musicall proportion.			
3	4	5	6
3	4	5	15
3	4	6	9
3	5	7	25
3	5	9	15
3	9	15	45
3	4	6	8
4	5	6	12
4	6	12	15
4	6	12	20
4	12	15	20
5	7	9	45
6	7	8	12
8	15	120	225
9	12	15	45
9	12	15	20
9	15	30	45
9	15	45	81
12	15	20	25
15	20	25	30
15	20	30	45
15	30	36	45
15	30	45	90
30	36	42	45
72	81	90	120

25.

Geometricall and musicall proportion together.			
2	3	6	12
3	4	6	9
3	4	6	12
3	6	8	12
4	6	12	36
4	7	28	49
5	9	15	45
5	9	45	225
5	9	45	81
9	12	16	72
9	15	25	45
9	15	45	225
9	25	45	225
15	20	30	45
20	30	36	45
25	45	81	225

16.

The Philosophers game.

Of the greatest triumphe.

The greatest triumph is of Arithmeticall, Geometricall, and Musicall proportions all ioyned together.

Arithmeticall, Geometricall, and Musicall proportions, all together.

2	3	4	6	6	8	12	16
2	3	6	9	6	12	15	20
2	4	6	12	7	12	42	72
2	5	8	20	8	15	64	120
2	7	12	42	8	15	120	225
2	9	16	72	12	15	16	20
3	4	6	8	12	15	20	25
3	4	6	9	15	20	36	45
3	5	9	15	15	30	45	90
3	5	15	25				
3	9	15	45		30		
4	6	8	12				
4	6	9	12				
4	7	16	28				
4	7	28	49				
5	6	25	45				
5	9	45	81				
5	25	45	225				
5	15	25	45				
6	8	9	12				

And thus is the firſt kynd of playing at an end. And this is ſufficiēt to teach you to play, but if you would learne to play cunningly, you muſt vſe to playe often, ſo ſhall you learne better then by anye preceptes or rules.

¶ Of the ſeconde kynde of playinge at the Phyloſophers game.

There is in this kynde of playing to be cōſidered, the table, ỹ men, the marking of them, the ſetting of them in araye, their marching, their lawes of taking, and the maner of triumphynge.

¶ Of the Table.

The Table is the ſame that was firſt deſcribed, namely a double chekbord.

¶ Of the men.

The Philosophers game.

The men be as before in number 48, 23. on a syde, and two contrarye kynges of euen and of odde. They must be of diuers colours, as hath bene sayde, the bottome of euery one must haue his enemies colour, and his owne mark of number, differing in this point from the former playing, that the enemies men taken, may serue onely to celebrate a triumphe, but not to fight on his syde that taketh them.

Of the marking of the men.

They be marked with the same numbers, that haue bene shewed before and therefore so are to be founde out as is taught before. But they be marked beside their nũbers, with coss call signes, which be signes vsed in the rule called regula cossa, or algebra, betokening rootes, quadrats, cubes, fourthe red quadrats, surdolides, & quadrates of cubes. All these .6. signes must be conteyned in thys game.

The

The signe { of the rote. ℞
of the quadrate. ☐
of the cube, or solide quadrat. ☐
of the foure squared quadrat. ☐☐
of the surfolide. ☐
of the squared cube. ☐☐

Euery number maye be taken for a rote, as .2. this number multiplyed in it selfe is a square as .4. The quadrat or square multiplied by the rote geueth a cube or solide square, as .4. multiplied by .2. geueth .8. that is a cube. Multiplie the cube by the roote, so haue you a squared quadrat, as .8. by .2. geueth 16. which is a quadrate of a quadrate. Multiplie the square or quadrat of quadrat by the rote, and the product is the surfolyde, as .2. tymes .16. is .32. whiche is a surfolide. Multiplie the surfolide by the rote, and the product is the quadrate of a cube, as .2. times .32. is .64. which is a quadrat of a cube. So haue you the rote quadrat, cube, quadrat of quadrat, surfolide, quadrat of cube .2.4.8.16.32.64.

The Philosophers game.

So.2.referred to.4.is a roote of a square, referred to.8.it is a roote of a cube.2.referred to.16.is the roote of a foure squared quadrate.2.referred to.32.is the roote of a surfolide.2.referred to.64.is ỳ roote of a quadrate of a cube. These numbers muste haue the proper cossicall signes. Also one number hauing diuers relations, may haue diuers cossical signes, as 9. referred to.81.being roote, hathe the signe of a roote ȝe, but beyng referred to.3.it hath the signe of a quadrate, for it is a quadrate of.3.and is thus signed.ȝ. and so of the rest that haue like relation.

The marking of the men.

The first order of roundes in both nũbers, must haue the signe of the roote vpõ them al after this maner.

The

The Philosophers game.

The second order of roundes founde out as before, be not all marked with cossicall signes, but onely .4. and .9. with the roote, and .81. with the quadrate. The rest haue none, because amonge their aduersaries men there is none that can be cossicall roote to them in such maner as this game requireth.

The first order of triangles (hauyng the same numbers that haue bene taught before) do all lack the cossicall signes, except onely .6. which is signed with the roote.

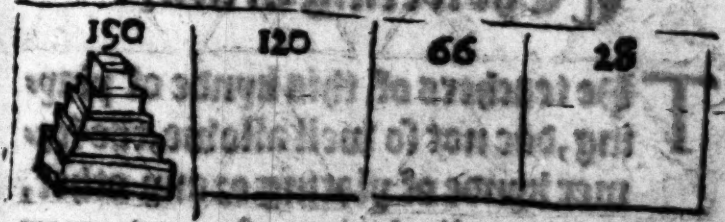
The Phylosopheres game.

The seconde order of triangles, haue all excepte one (whiche is the number of .100.) their cossicall signes, as 9. bothe of the roote and of the quadrate, 25. 36. and .49. haue the signe of the quadrate .64. of the quadrate and the cube, and also the quadrat of cube .16. and .81. of the quadrate, and the foure squared quadrate.

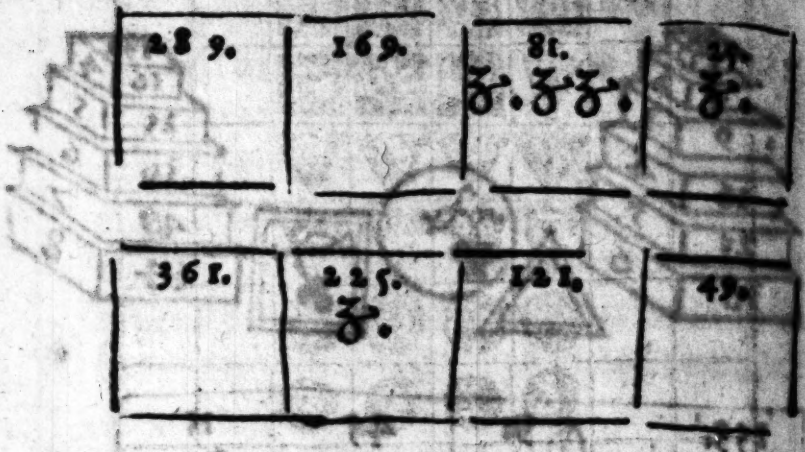
In the firste order of squares, onely 15. is marked with the roote, all the reste doe want theyr cossicall sygnes in thys game.

The

153.	91	45	15



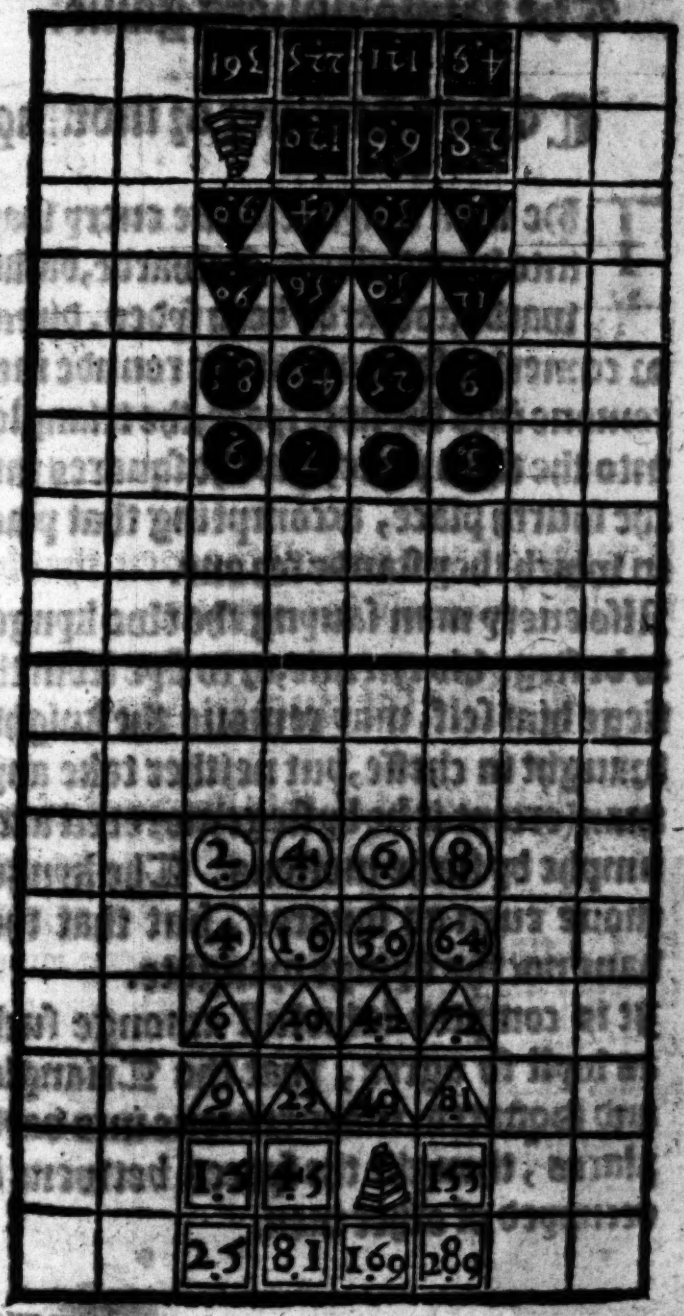
The seconde order of squares hath.3. numbers marked with cossicall signes, that is.25.and.225.wyth the signe of the quadzate.81.is marked with the sygne of the quadzate and the foure-squared quadzate.



And thus haue you all the men that be marked with colliçall fygnes.

¶ The setting in aray.

THe teachers of this kynde of playing, doe not so well allowe, the former kynde of placing or any other, as the naturall placing of euery man vnder him of whome he aryseth. So they conteyne .6. ranks in length, extending to the furthermoste edge of the Table after this sorte.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¶ The marchyng or mouing.

THe men maye remoue euery way, into foyde places, forwarde, backewarde, towarde both sydes, direcre or cornerwyse. So that the rounde men remoue into the nexte space, the triangles into the third place, and the squares into the fourth place, accompting that place in which they stande for one.

Also euery man sauyng the two kynges to besiege his enemie, or to flye from the siege him selfe, may remoue the knights draught in chesse, but neither take anye man (except it be by siege) nor erect a triumphe by suche motions. The kynges moue euen as squares, but that they haue not the flynge draughte.

It is compted lawefull amonge suche as wyll so agree, that the Triangles and Squares, maye remoue into foyde places, thoughe the spaces betweene be occupyed of other men.

¶ The

¶ The maner of takyng.

THe men may be taken seuen ways by Obsidion, by Equalitie, by Addition, by Substraction, by Multiplication, by Diuision, and by Cossicall Signes.

¶ Of takynge by Obsidion.

ALl men maye be taken by Obsidion when by foure men they be letted of theyr ordinarie draughte, as hath bene taught before.

¶ Of takynge by Equalitie.

BY Equalitie maye these men take or be taken, as hathe bene sayde before, 9. 16. 25. 36. 49. 64. 81, as yf after you haue played your .9. you see youre aduersaryes .9. stande in

your

your mans draught, you may take him vp not remouyng into his place, vnlesse you espye him standing in your draught before you playe, then muste you take him vp and remoue into his place.

Of takynge by Addition.

The takyng by Addition is all one with the first kynde of play, in all respectes, sauing that some require the men that shoulde take by Addition to stande in the next spaces to him that is taken, either directly, or contrarywyse, but the former waye is better.

Of taking by substraction.

That whiche was sayde in the first kinde of substraction and that whiche was last sayde of Addition may be bothe referred hyther. For this sub-

straction

fraction differeth not from the former, but for the opinion of them, that would haue the two takers stande onelye in the nexte spaces to hym that is taken.

¶ Of takyng by Multiplication.

TAkyng by multiplication doth differ. For in this kynde of playng, it is thus. When your man standeth so, that beyng lesser then your aduersaries man, you may multiplie your man by the voyde spaces betweene them, and the product is all one w̄ the aduersarye, you maye take hym vp, not remouynge into his place, except you espye hym so, before you remoue your man.

¶ Of takynge by Diuision.

Lykewise

Likewise by Diuision, yf your man beyng greater then the aduersarye, standeth so, that beyng deuyded by the boyde spaces, the quotient is all one with the aduersarye, you maye take hym vp, not remouyng into hys place, vnlesse you see hym so standynge before you drawe.

Of taking by Cofficall signes.

By Cofficall sygnes anye man that hath these signes, ♈.♌.♐.♓. meeting wt his roote in his ordinary draught that hath this signe ♌ taketh him vp, or elles is taken of him, without remouyng into his place, except he maye take him before he remoue.

Of the kynges, and their taking.

The Philosophers game.

The King of the euen must be foure square, hauyng fiue steppes, euery one lesser then other, on one syde he muste haue on him these rootes. 1. 2. 3. 4. 5. 6. on the other syde the quadrates arising of these rots, that is 1. 4. 9. 16. 25. 36.

¶ The King of the odde men, muste haue but fyue steppes, that is 1. 3. 5. 7. 9. lackyng the rootes that he can not ende in. 1. The quadrates of hys rootes be these. 16. 25. 36. 49. 64. These muste be so set on, that the least must be hyghest and the greatest lowest.

¶ The Kinges be taken by Obsidion, or yt their Pyramidall number, be taken by anye of the aforsayde meanes. Also yt by suche meanes you can take all his quadrates one after another.

¶ The priuilege of the King.

The Philosophers game.

If anye of the Kynges quadrates be taken, he maye redeme it by anye of his men hauing the same number, and muste remoue into hys place, whiche redemed hym. But yf he haue none of the same number, he maye redeme hym for anye man of hys, that his aduersarye wyll chuse, and hymselfe remoue into hys place by whome he is redemed.

The Philosophers game.

A table to take the men by Multiplication and Division.

euē against od spaces.			euē. spaces.	od		euē. spaces.	od	
6	2	12	2	8	16	3	5	15
8	2	16	8	8	64	5	5	25
15	2	30	4	9	36	9	5	45
45	2	90	9	9	81	12	6	72
4	3	12	25	9	225	7	7	49
4	4	16	9	10	90	5	9	45
9	4	36		21.		9	9	81
16	4	64	od against euē spaces.			3	12	36
6	5	30	3	2	6	3	14	42
20	5	100	36	2	72		17.	
2	6	12	3	3	9			
15	6	90	5	3	15			
20	6	120	12	3	36			
4	7	28	5	4	20			
8	7	56	9	4	36			
spaces.			16	4	64			

The Philosophers game.

¶ For Diuision.

euē	odd	euē
spaces.		spaces.
5 2 3	12 2 6	¶ To take by cossical signes
72 2 36	16 2 8	2 16. ♃♃
15 3 5	30 2 15	2 64. ♃♀
36 3 12	90 2 45	3 81. ♂♂
9 3 3	12 3 4	3 9. ☉
20 4 5	16 4 4	4 16. ♃
36 4 9	36 4 9	4 64. ♀
64 4 16	64 4 16	5 25. ♀
15 5 3	100 4 25	6 36. ☿
25 5 5	22 5 45	7 49. ♂
45 5 9	30 5 6	8 64. ♃
42 6 7	100 5 20	9 81. ☽
72 6 12	12 6 2	15 225. ♃
49 7 7	36 6 6	
72 8 9	90 6 15	
45 9 5	120 6 20	
81 9 9	28 7 4	
36 12 3	56 7 8	
91 13 7	16 8 2	
42 14 3	64 8 8	
	120 8 15	
20.	5 9 4	
	81 9 9	
	225 9 25	
	90 10 9	
	66 11 6	
	28 14 2	
	27.	

Of the triumph.

The triumph is after the kynge be cleane taken away, to be erected in the aduersaries campe, as well of your owne men as of your aduersaries men that be taken, or of both in proporcion as hath bene shewed before, and proclamned that those men ons placed, may not be taken, as it was declared sufficiently, and no difference betwene the triumphes, sauyng that some wyll not alowe a triumphe but of foure numbers, and two proporcions at the lest. All three for the greater victorie, makynge but two kynds of triumphes.

Here folowethe the thyrd kynde of playing at the Philosophers game.

The Philosophers game.

There must also in this thyrd kynde be considered the table, the men, their markyng, the order of theyr battell, the motions, their taking, and last of all theyr triumphing.

The table is the same that hath bene ryghte already discribed. Yet some wyll not haue it so longe, but at the leste it must conteyne. 10. squares in length and alwayes. 8. in breadeth. The longest is best.

Of the men.

The men be. 48. as it hath bene told of two contrary collor, the head and bottom all of one collor, because men ons taken be no more occupyed in thys kynde of playing.

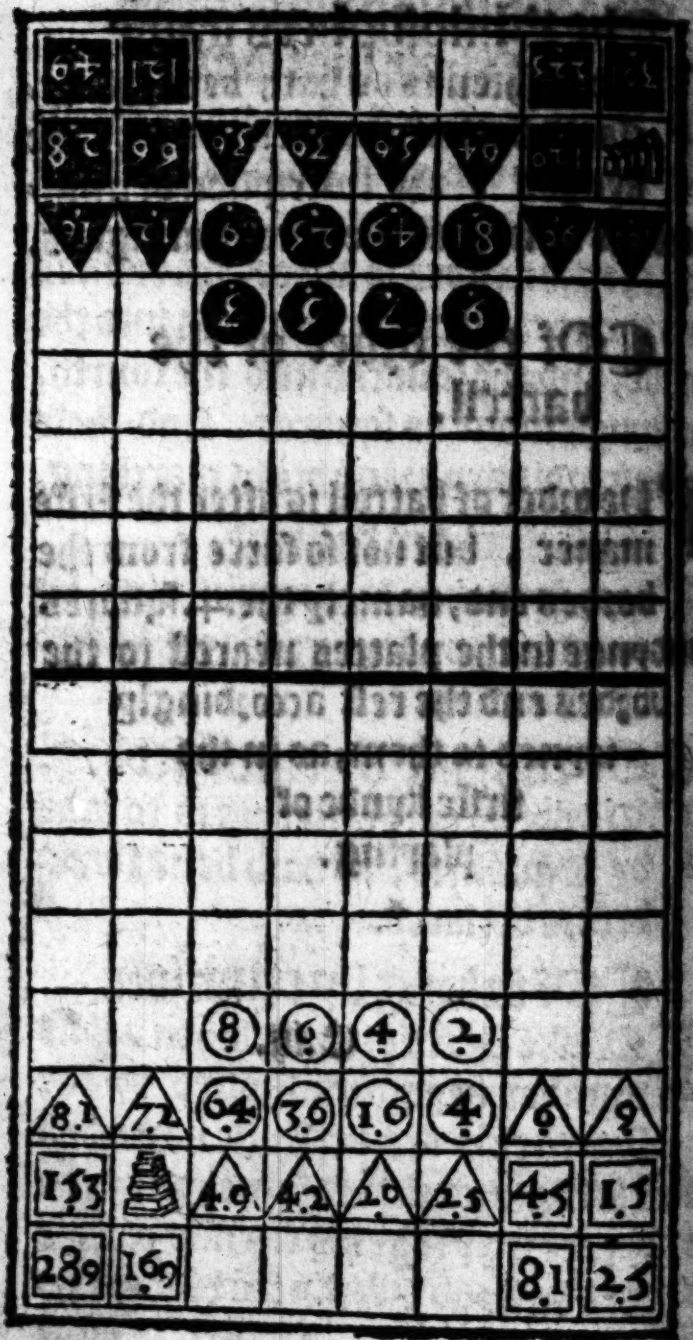
The inscription and fashion.

The Philosophers game.

The fashion is as hath bene last declared both of the men, and of the kynges, the inscription of numbers the same, but wout cossical signes.

Of the order of the battell.

The order of battell is after the firste maner, but not so farre from the bordes end, namely the .4. squares standynge in the plattes nearest to the bordes end the rest accordingly ioyned to them, as in the firste kynde of playing.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¶ Of their motions.

THe men moue frowarde and backward, to the right hand, and to the left hande, but not cornerwise, except the gamesters so agree, the rounds into the next space, ỹ triangles into the thyrde, and the squares into the fourth, the kyngs moue as squares. And these be their ordinary draughts in marching.

¶ Of their taking.

THey are taken by encountering, by eruption, by laying wayght, and by Obsidion.

¶ Of takyng by encoũtering.

TO take by encountering is to take by Equalitie, as hath bene twyse before declared.

¶ Of taking by eruption.

TO take by eruption is when a lesse number beyng multiplied by the spaces that are betwene him & hys aduersary, ỹ product is asmuch as his aduersary, he may take his enemie awaye whether he stand directly frõ him or cornerwise.

For men that may be taken by exemption looke in the table of takyng by multiplication in the second kynd of playing.

¶Of takyng by deceypt or lying weyght.

TO take by deceypt or lying weight, is to take by addition, not as before when the aduersary standeth within the draught of two men which being added make the iuste number of the aduersary, but when the .2. numbers that are to be added, stande in the next spaces to the aduersarie. For to take by deceipt, looke in the table that was set forth for takyng by addition in the first kynde of playinge.

¶Of taking by Obsidion.

BY Obsidion all men may be taken, when foure men beseige the aduersarye, standynge in the foure next spaces

spaces about him directly, or cornerwise, the man so besieged can not escape, because he can not remoue cornerwyse, therefore maye be taken vp, so soone as the last of the foure is set in his place.

In all these kyndes of playing no Oblidion can be of any man with foure of his fellowes, but all foure muste be hys aduersaries.

In this thyrde kynde, these men can be none otherwyse taken but by Oblidion. Namely amonge the euen. 2. 4. 4. 135. among the odde. 3. 5. 7. 190.

In all maner of taking this is to be noted, that we muste not place the man which taketh in place of him that is taken, but when he maye be taken before we drawe, then shall we remoue our man into his place.

¶ The priuilege of the king.

The king standeth for so many men as he hath steppes, that is the euen for. 6. the odde for. 5. if anye of these

(except the lowest and greatest) be taken the king may redeme hym, by any man of his that is of the same number. If he haue none of the same number, he may redeme him by any of his men that his aduersary will chuse. But if his lowest square be taken, no ransom will deliuer him. Also if the whole kyng at ons that is the whole number of Pyamis be taken, he can not be redemed.

¶ Of the triumphe.

TO take awaye the tediousnes of long play from them that be yonge beginners, writers of this game haue inuented diuers kyndes of shorte victories, wherefore they deuide victory into proper and common. Of the proper victorie need nothing here be spoken, for all things thereto belonging are sufficiently set forth in ỹ first kynd of playing.

¶ Of the common victory.

THe common victorie (they say) is after fyue maners, for men contende either for bodies, goods, quarelles, honour, or els for both quarels & honor.

Victo-

The Phylosophers game.

Victory of bodies.

Victory of bodies is only to take a certain number of men, as if the gamesters agree, that he which first taketh 4. or 5. or 6. or 10. men &c, shall wyn the game.

Victorye of goods.

Victorie of goods, is to take a certain number wout respect of the men. As if it be couenanted, that he which first taketh men amoũting to ỹ number of. 100. or 200. shall haue the victorie.

Victory of quarell.

Victorie of quarell is when neither the men, nor the number, but the characters of the number be considered. As if it be determined that he which first taketh. 100. in. 3. characters not regarding in how many men they stande, shall winne. As. 2. 4. 6. 8. 24. 64. so you haue. 100. in. 3. characters it skilleth not, although there be more then. 100. as in this exãple there is more then. 100. by. 4.

Victorie

Victorie of honour.

VIctorie of honour, is when a determined number is made in a determined number of men, as if it be determined that he whiche first cometh to.100. in.8. men, shall winne the game. As in these.2. 4. 6. 8. 4. 16. 45. 15. And though there were somwhat more then 100. so it be in.8. men, it skilleth not.

Of victorie of honour and quarell.

THe victorie of honour and quarell, is when one obteyneth the decreed number, in the decreed number of men and the decreed number of characters: as let.100. be the decreed number. 8. the determined number of men, and 9. the determined number of characters. He that obteyneth.2. 4. 6. 8. 4. 6. 9. 64. obteineth the victorie of honour and quarell. It shalbe no hinderance though.8.

men

men and.9.caracters conteyne somwhat more then.100.so that there be not.100. vpon one man, as in the victorie before.

Victorie of standers.

They haue inuented another victorie, that is of standerdes, by counterfeyting two armies, one of the Christians, another of the Turkes. The whyte men, that is the euen hoste, conteyneth.1312.footemen (not compting the rootes of squares expressed in the kynges) let the first and last be captaines and let them deuide the whole armye into.10.standerds so euery standerd shall haue.130.men, besyde the two captaines and the ten standerd bearers. The black men, ꝑ is the odde armie (except ꝑ kings rootes) be.1752. The two captaynes and ten standerd bearers taken out, there remayneth.1740.soudyers, to euery standerd.174. He that wynneth more standers hath the victorye. If the euen hoste

wynne

The Phylosophers game.

wynne. 348. men he hath obtayned two ſtãderds if he wynne. 522 he hath gotten thre ſtanderds and foꝛth of the reſt.

Yf the odde armye wynne . 260. they wyn two ſtanderds. 390. thꝛee ſtanderds and ſo of the reſt.

¶ A Table of the victoꝛye of ſtanderds.

One ſtanderd of ỹ euen, conteyneth.	130.
Two ſtanderds.	260.
Thꝛée ſtanderds.	390.
Foure ſtanderds.	520.
Fyue ſtanderds.	650.
Sixe ſtanderds.	780.
Seuen ſtanderds.	910.
Eyght ſtanderds.	1040.
Nyne ſtanderds.	1170.
Tenne ſtanderds.	1300.

Dm

The Philosophers game.

One standerd of the odde, conteyneth.	174.
Two standers.	348.
Three standerds.	522.
Foure standerds.	696.
Fyue standerds.	870.
Syxe standerds.	1044.
Seuen standerds.	1218.
Eyght standerds.	1392.
Nyne standerds.	1566.
Tenne standerds.	1740.

YOu maye vse anye of these syxe kyndes of common victorie, in euery one of the three kynds of playing.

FINIS.

Prynted at London by Rovland Hall, for Iames Rovvbothum, and are to be solde at his shoppe in chepeside vnder Bovve churche.

1563.


I R